

Alcohol-specific deaths

2020



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This statistical report details information on the number of deaths that were registered in Scotland in 2020 which are classified as alcohol-specific.

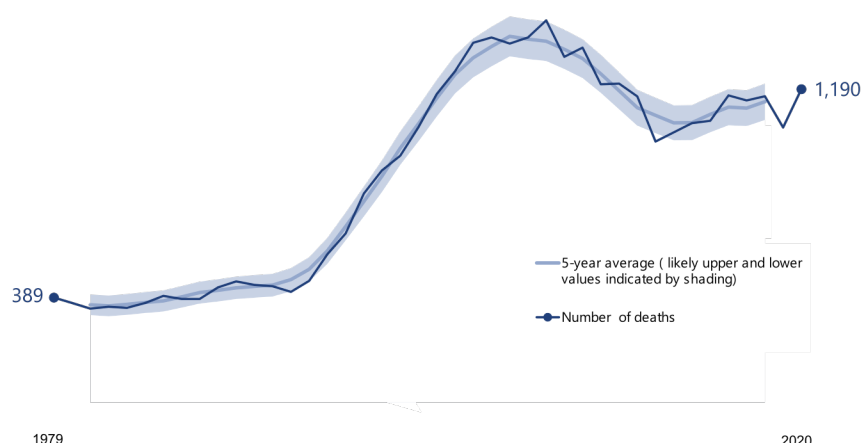
It also includes breakdowns by sex, age, cause of death and deprivation.

There were 1,190 alcohol-specific deaths in 2020

There were 1,190 alcohol-specific deaths registered in Scotland in 2020. This was an increase of 16% on 1,020 in 2019.

This represents a rate of 21.5 deaths per 100,000 population in Scotland.

Alcohol-specific deaths



Alcohol-specific death rates varied by local authority

In 2016 - 2020:

Inverclyde and Glasgow City had the highest rates of alcohol-specific deaths per 100,000 population.

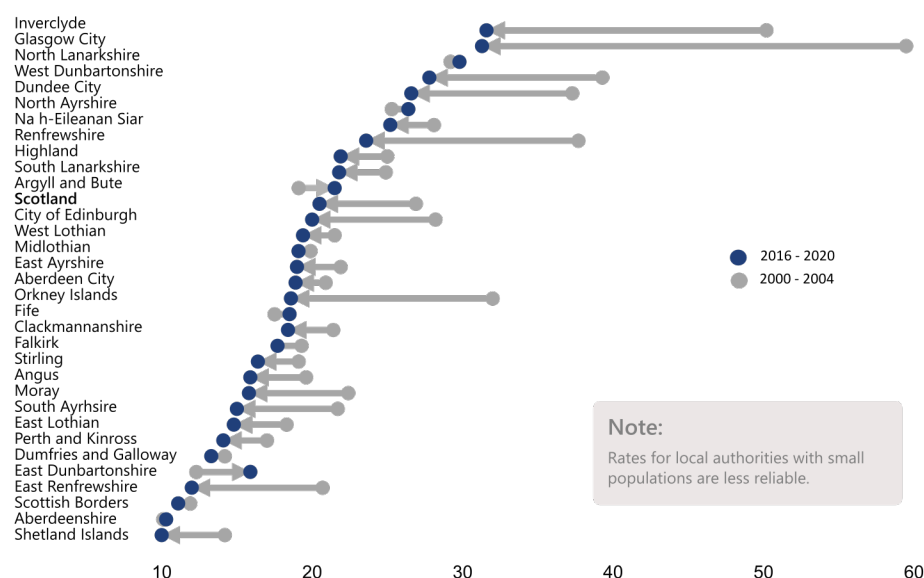
Since 2000-2004:

Glasgow City, Inverclyde and Renfrewshire rates have reduced the most.

The death rates of five local authorities have increased: Argyll and Bute, North Ayrshire, Fife, North Lanarkshire and Aberdeenshire.

Death rate by local authority

Deaths per 100,000 population



Alcohol-specific deaths more likely in most deprived areas

The alcohol-specific death rate (adjusted for age) was 4.3 times the rate in the least deprived areas in 2020.

The death rate for all causes was 1.9 times the rate in the least deprived areas.

Deaths per 100,000 population by deprivation

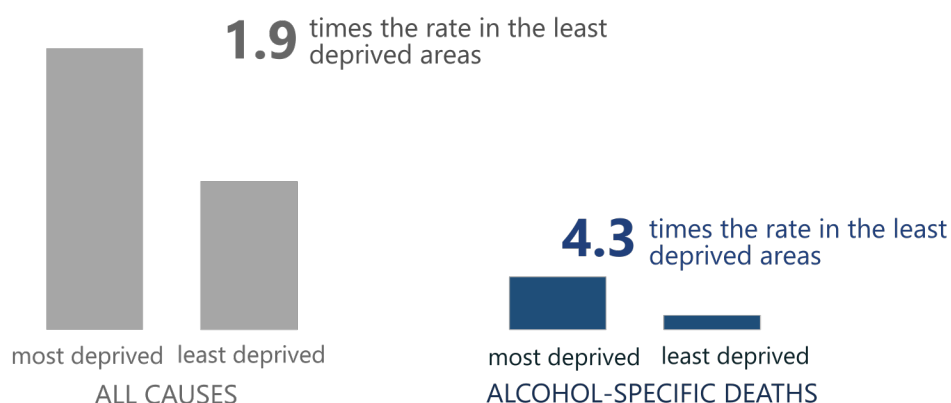


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1. Key Findings

In 2020

- Analysis of alcohol-specific deaths in 2020 shows there were 1,190 alcohol-specific deaths registered in Scotland, 170 greater than in 2019 representing a 17% increase.
- The age-standardised alcohol-specific death rate was 21.5 deaths per 100,000 population in Scotland.
- The rates of male alcohol-specific deaths (31.3 deaths per 100,000) were more than double the rates for females (12.7 deaths per 100,000).
- Males accounted for over two-thirds (69%) of alcohol-specific deaths.
- Most alcohol-specific deaths were of people in their 50s and 60s (711, 60% of the total in 2020).
- After adjusting for age, alcohol-specific death rates in the most deprived areas were 4.3 times more than those in the least deprived areas.

How this compares to previous years

- 2020 represents the highest number of alcohol-specific deaths registered since 2008 (1,316).
- Since the series began in 1979, there have usually been at least twice as many male deaths as female deaths. This remains the case in 2020 with male deaths (826) more than double the number of female deaths (364).
- Over the latest five years, 55-59 was the age-group with the largest number of alcohol-specific deaths, with an average of 185 per year. The average age of such deaths has increased over the last decade: it was around 55 for many years but has risen to around 59 in the last few years.

2. Introduction

This report presents statistics on the number of deaths and the age-standardised mortality rates for deaths from causes known to be exclusively caused by alcohol consumption. Deaths are defined using the International Statistical Classification of Diseases and Related Health Problems (ICD).

Definition of alcohol-specific deaths

ICD-10 codes for causes of death wholly specific to alcohol consumption, 2000 onwards:

ICD-10 code	Description
• E24.4	Alcohol-induced pseudo-Cushing's syndrome
• F10	Mental and behavioural disorders due to use of alcohol
• G31.2	Degeneration of nervous system due to alcohol
• G62.1	Alcoholic polyneuropathy
• G72.1	Alcoholic myopathy
• I42.6	Alcoholic cardiomyopathy
• K29.2	Alcoholic gastritis
• K70	Alcoholic liver disease
• K85.2	Alcohol-induced acute pancreatitis
• K86.0	Alcohol induced chronic pancreatitis
• Q86.0	Fetal induced alcohol syndrome (dysmorphic)
• R78.0	Excess alcohol blood levels
• X45	Accidental poisoning by and exposure to alcohol
• X65	Intentional self-poisoning by and exposure to alcohol
• Y15	Poisoning by and exposure to alcohol, undetermined intent

ICD-9 codes are used for alcohol-specific deaths figures between 1979 to 1999. Please see the methodology document for a detailed breakdown of these.

The misuse of alcohol is associated with a wider range of diseases than those included in the alcohol-specific definition. The definition does not include diseases that are shown to be only partially attributable to alcohol¹. Further analysis of deaths attributable (wholly and partially) to alcohol consumption has been carried out by Public Health Scotland and is available on the [ScotPHO website](#)

¹ For example cancers of the mouth, oesophagus and liver.

Why use age-standardised mortality rates?

Age-standardised mortality rates are a better measure of mortality than numbers of deaths, as they account for the population size and age structure and provide more reliable comparisons between groups or over time. As the probability of death tends to increase with age, changes in the age-distribution of the population could have an effect on any apparent trend shown by numbers of deaths, or crude death rates (dividing the number of deaths by the total population).

Similarly, if two groups' populations have different age-distributions, using age-standardised rates will remove the effect of the differences between the groups and show which one has the higher mortality.

Age-standardised rates are therefore more reliable for comparing mortality over time and between different countries, different areas within a country, deprivation quintiles, and different sexes.

More information on the calculation of age-standardised mortality rates is available on our [website](#).

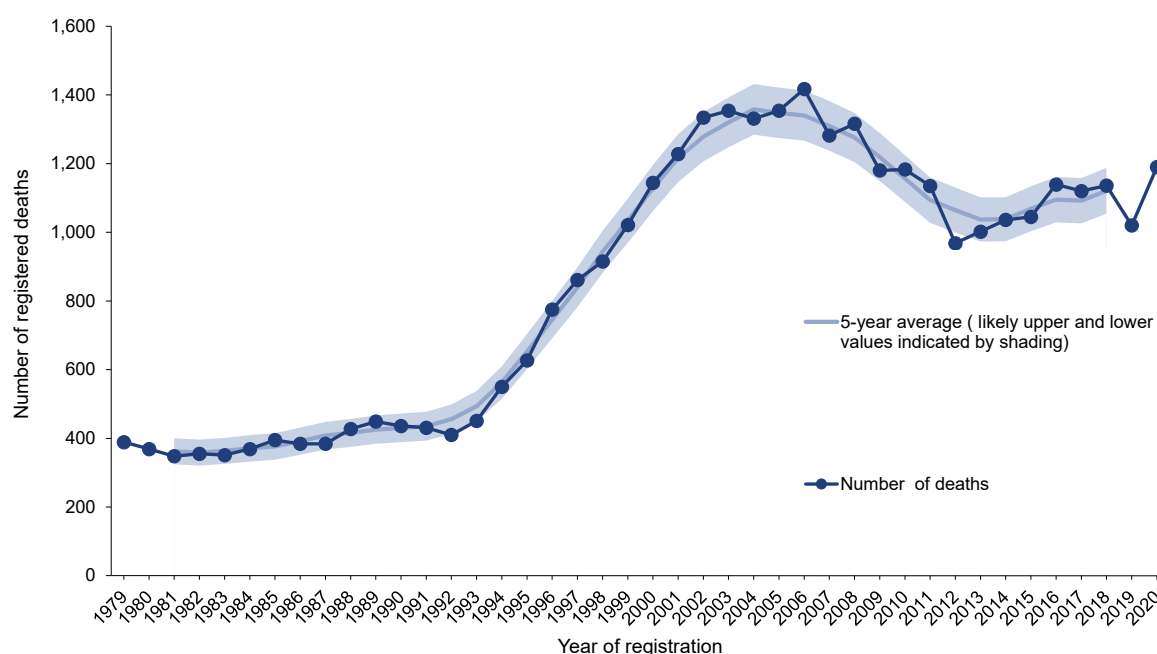
3. Alcohol-specific deaths in Scotland

There were 1,190 alcohol-specific deaths in 2020 in Scotland, representing an increase of 17% (170 deaths) on 2019 (1,020 deaths). This is the highest number of alcohol-specific deaths registered since 2008 (1,316).

Between 2012 and 2018 the number of alcohol-specific deaths had been increasing before falling by 10% in 2019. This was a notable fall which has only occurred on three other occasions (since the beginning of this data series in 1979) where there has been a reduction in alcohol-specific deaths of around 10% or more in a single year (in 2007, 2009 and 2012).

The increase of 17% in 2020 reverses the fall in 2019. The increase in male deaths has driven this increase as there was very little change in the number of female deaths.

Figure 1: Alcohol-specific deaths, Scotland, 1979 to 2020



4. Alcohol-specific deaths by sex

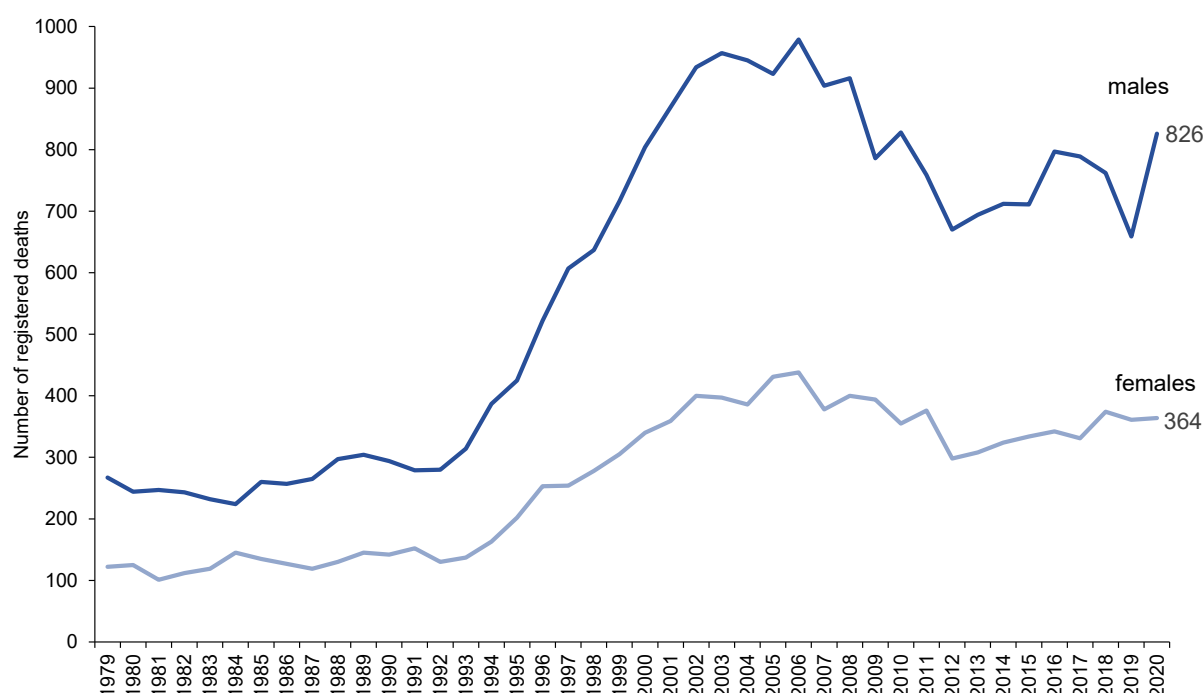
The number of alcohol-specific deaths among males has been consistently higher than the number of female deaths since our analysis began in 1979.

In 2020 there were:

- 826 male alcohol-specific deaths registered
- 364 female alcohol-specific deaths registered

The number of male deaths increased sharply in 2020 whilst the number of female deaths remains relatively similar to the number in 2019. In times of previous increases in alcohol-specific deaths, increases in male deaths have most regularly driven the increase.

Figure 2A: Alcohol-specific deaths by sex, Scotland, 1979 - 2020



The age-standardised death rates per 100,000 population in 2020:

- For males was 31.3 (up from 26.7 in 2012)
- For females was 12.7 (remained relatively unchanged over the time series with a rate of 10.9 in 2012)

The trend in age-standardised death rates follows that of the number of deaths, which confirms the increasing deaths are not simply due to an increasing population but show an increasing proportion of deaths attributable to alcohol-specific causes within the population.

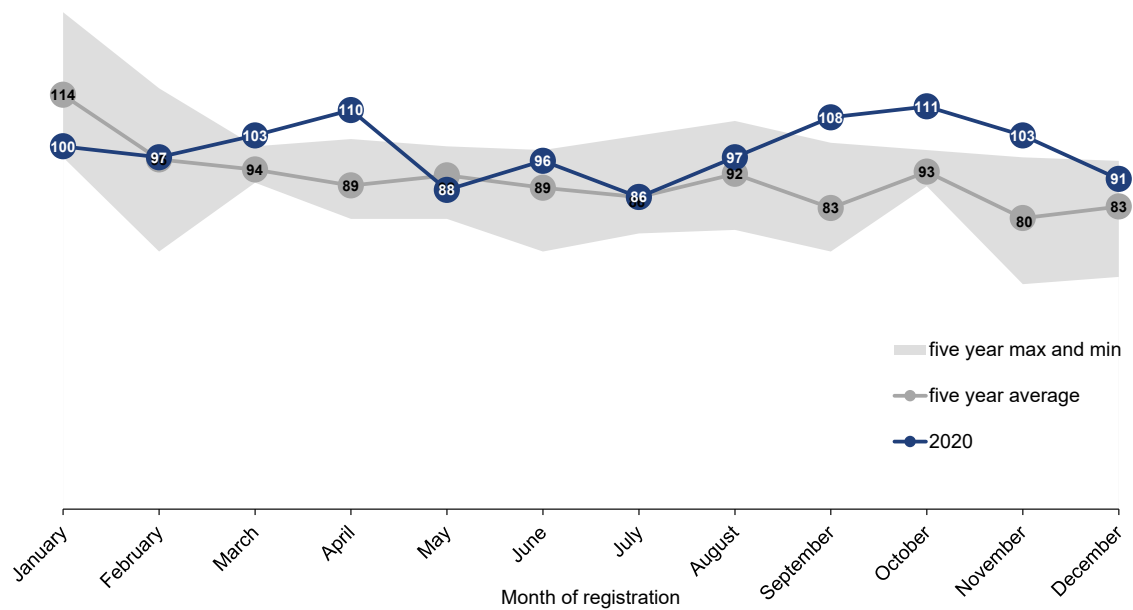
5. Alcohol-specific deaths by month

The number of alcohol-specific deaths registered in 2020 was higher than the five year average (2015-2019) for 9 months of the year.

The months with the highest number of alcohol-specific deaths registered were:

- October (111 deaths)
- April (110 deaths)
- September (108 deaths)

Figure 3: Alcohol-specific deaths by month: registered in Scotland 2020



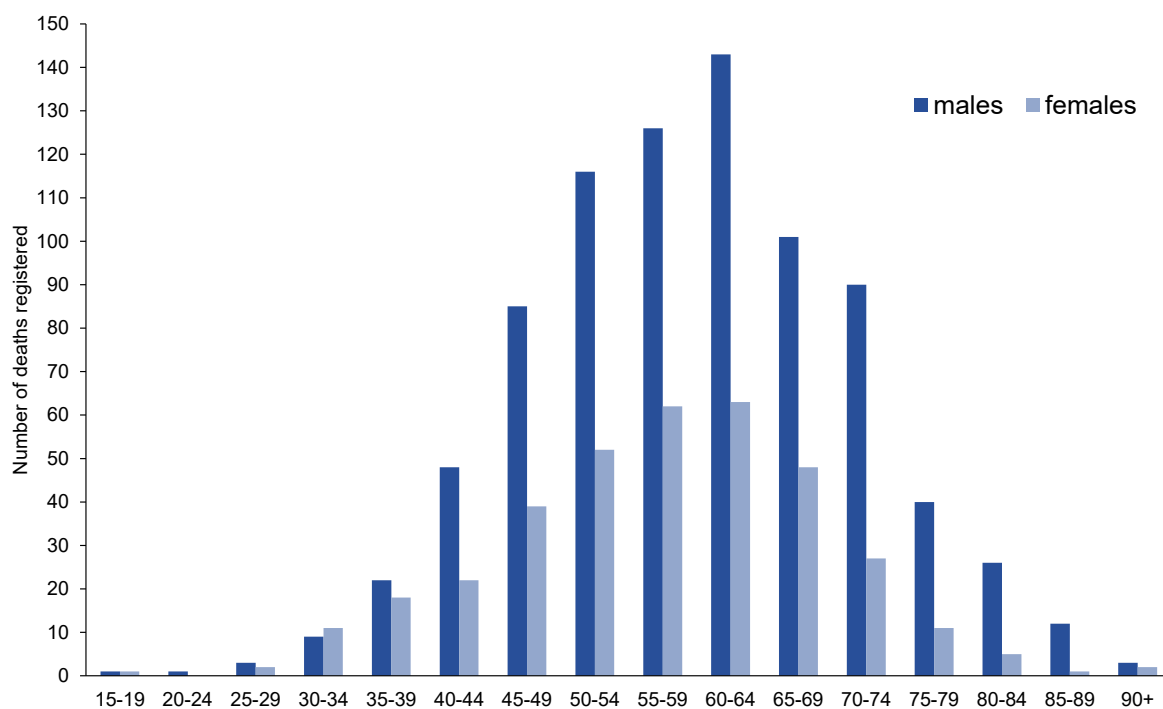
6. Alcohol-specific deaths by age

The most common age groups for alcohol-specific deaths for both males and females were:

- 60-64 years
- 55-59 years
- 50-54 years

Within these age groups the number of female deaths were around half the number of male deaths.

Figure 4A: Alcohol-specific deaths by sex and age group, Scotland 2020



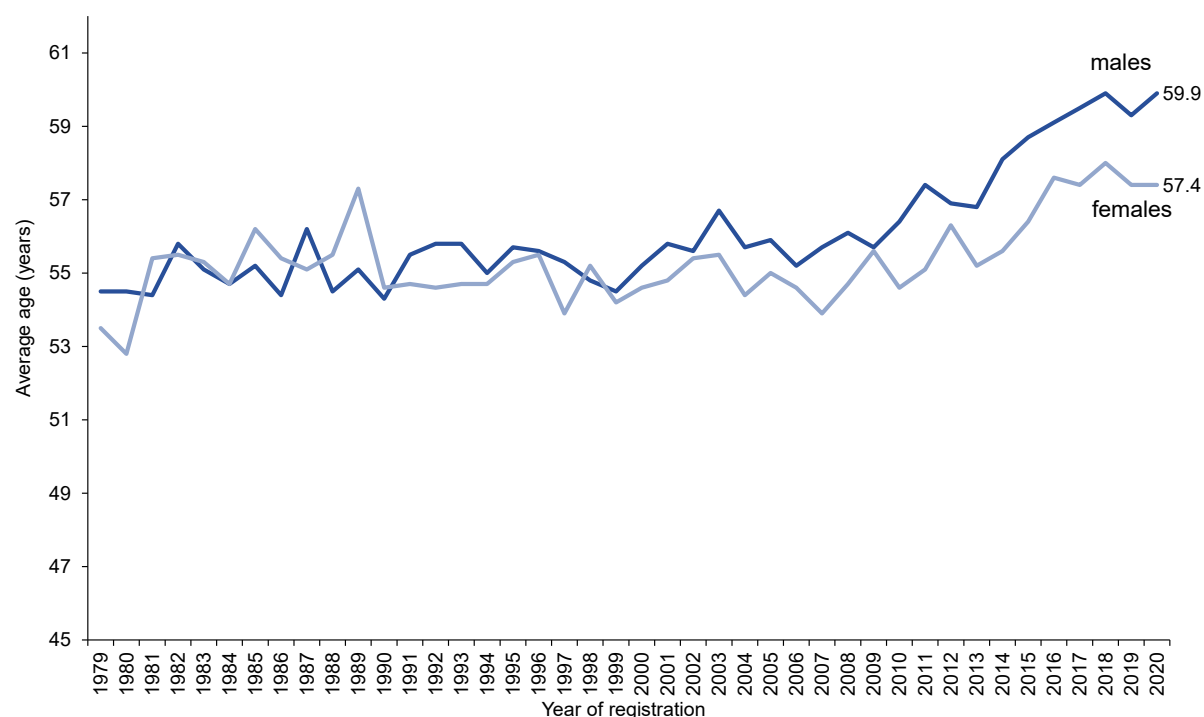
The average age of people dying from alcohol-specific deaths in 2020 was:

- Males - 59.9 years
- Females - 57.4 years

The average age at death has increased for both males and females since 1979 - by 5.4 years for males and 3.9 years for females. The gap between the average ages for males and females has also widened.

In the most recent year the average age for females has remained the same whilst males have seen an increase of +0.6 years, largely due to an increase in deaths among 60-64 year olds.

Figure 4B: Average age at death of alcohol-specific deaths by sex, Scotland, 1979 – 2020

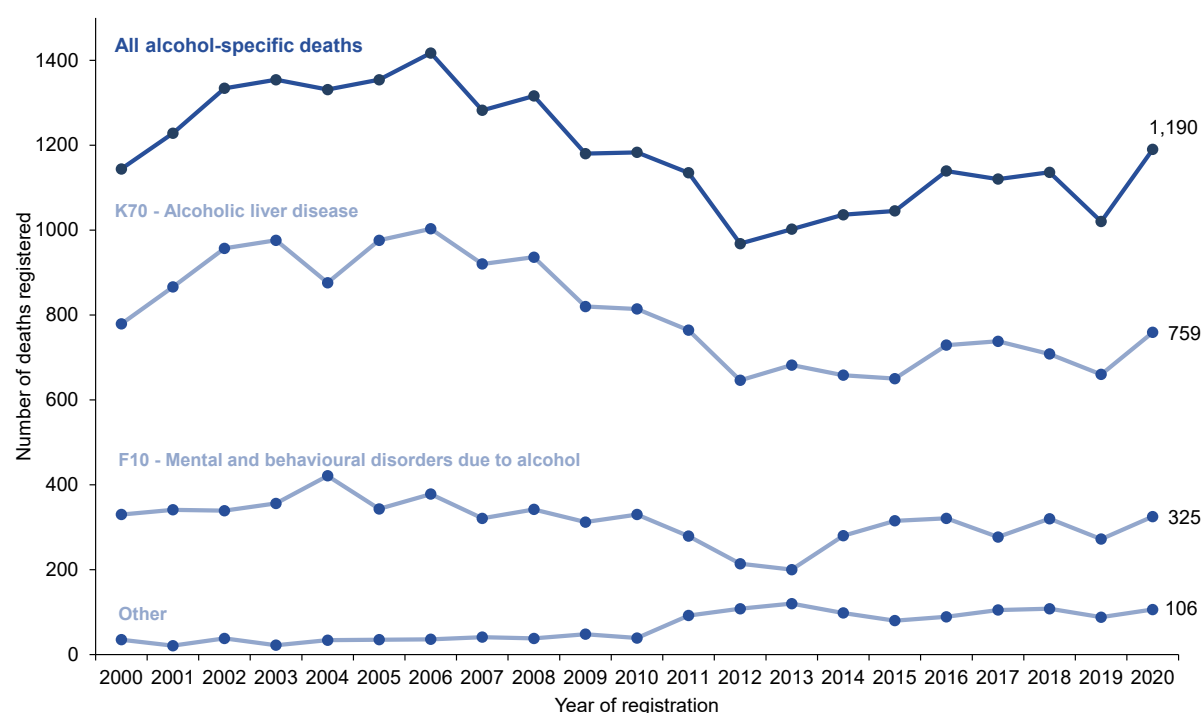


7. Alcohol-specific deaths by cause

Alcoholic liver disease and mental and behavioural disorders due to alcohol have been the leading causes of death for alcohol-specific deaths since 2000.

In 2020 alcoholic liver disease was the underlying cause of death in 64% of all alcohol specific deaths (759 out of 1,190 deaths). Mental and behavioural disorders due to use of alcohol accounted for 27% of all alcohol-specific deaths (325 out of 1,190 deaths).

Figure 5: Alcohol-specific deaths by underlying cause of death ICD-10 registered in Scotland, 2000 - 2020



8. Alcohol-specific deaths by NHS Board area

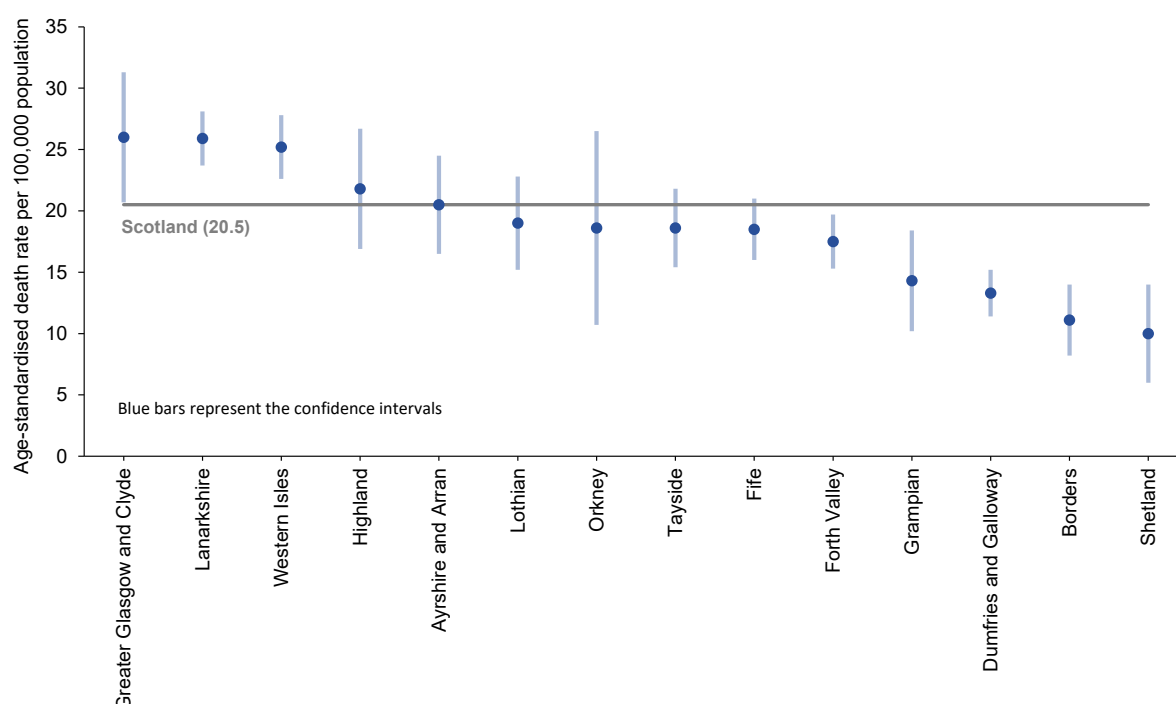
The age-standardised death rate for alcohol-specific deaths in Scotland for the five year period 2016-2020 was 20.5 deaths per 100,000 population.

Four health boards had death rates higher than the average for Scotland:

- Greater Glasgow and Clyde (26.0).
- Lanarkshire (25.9)
- Western Isles (25.2)
- Highland (21.8)

Greater Glasgow and Clyde has previously had the highest rate for the majority of the time series (2000–2004 to 2009–2013). In more recent years, Western Isles had the highest rate for the previous six 5 year average periods from 2010–2014 and 2015–2019.

Figure 6: Alcohol-specific age-standardised death rates by NHS Board area, Scotland, 2016-2020



9. Alcohol-specific deaths by council area

Eleven council areas had death rates greater than the five year average for Scotland (20.5 deaths per 100,000 population) in 2016-2020.

The councils with the highest death rates were:

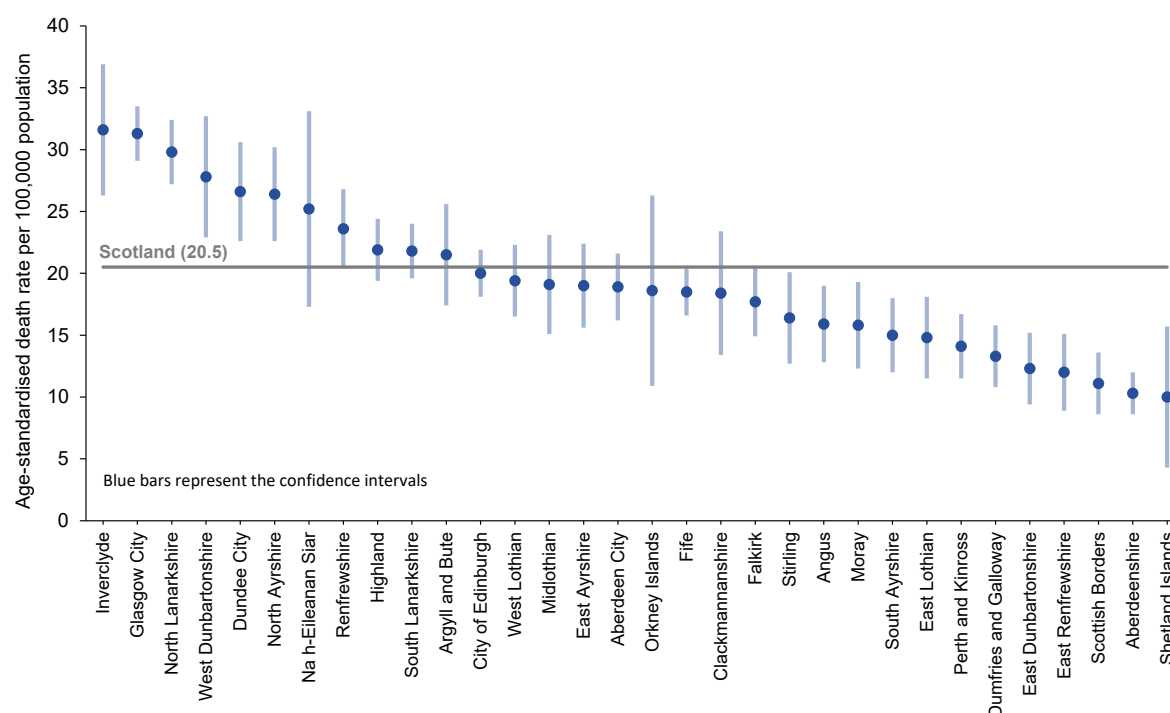
- Inverclyde (31.6)
- Glasgow City (31.3)
- North Lanarkshire (29.8)

The councils with the lowest death rates were:

- Shetland Islands (10.0)
- Aberdeenshire (10.3)
- Scottish Borders (11.1)

Glasgow City had the highest rate five year average death rate for the majority of the time series (2000–2004 to 2013–2017 and 2015-2019).

Figure 7a: Alcohol-specific age-standardised death rates by local authority, Scotland 2016-2020



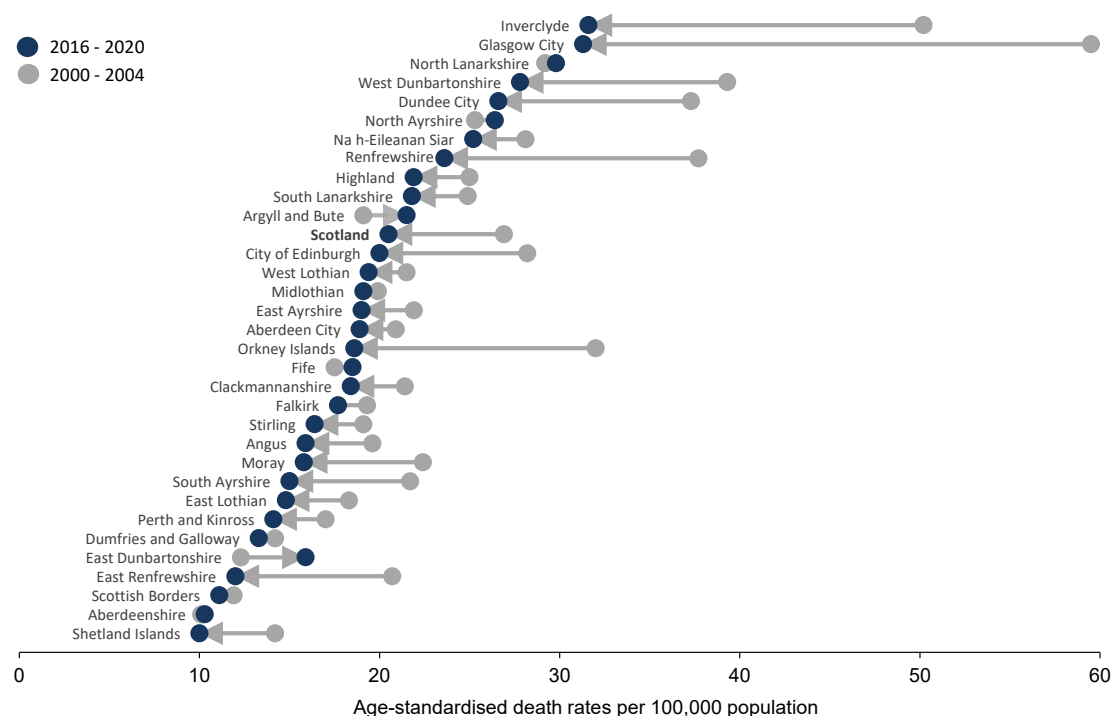
The five year average for the overall death rate for alcohol-specific deaths in Scotland has reduced from 26.9 in 2000-2004 to 20.5 in 2016-2020.

The majority of council areas have seen reduced death rates since 2000-2004.

Five local authorities have seen increased death rates in 2016-2020 compared to their rates in 2000-2004:

- Argyll and Bute (+2.4)
- North Ayrshire (+1.1)
- Fife (+1)
- North Lanarkshire (+0.6)
- Aberdeenshire (+0.2)

Figure 7b: Change in the rate of alcohol-specific deaths by local authority, Scotland, 2000-2004 to 2016-2020



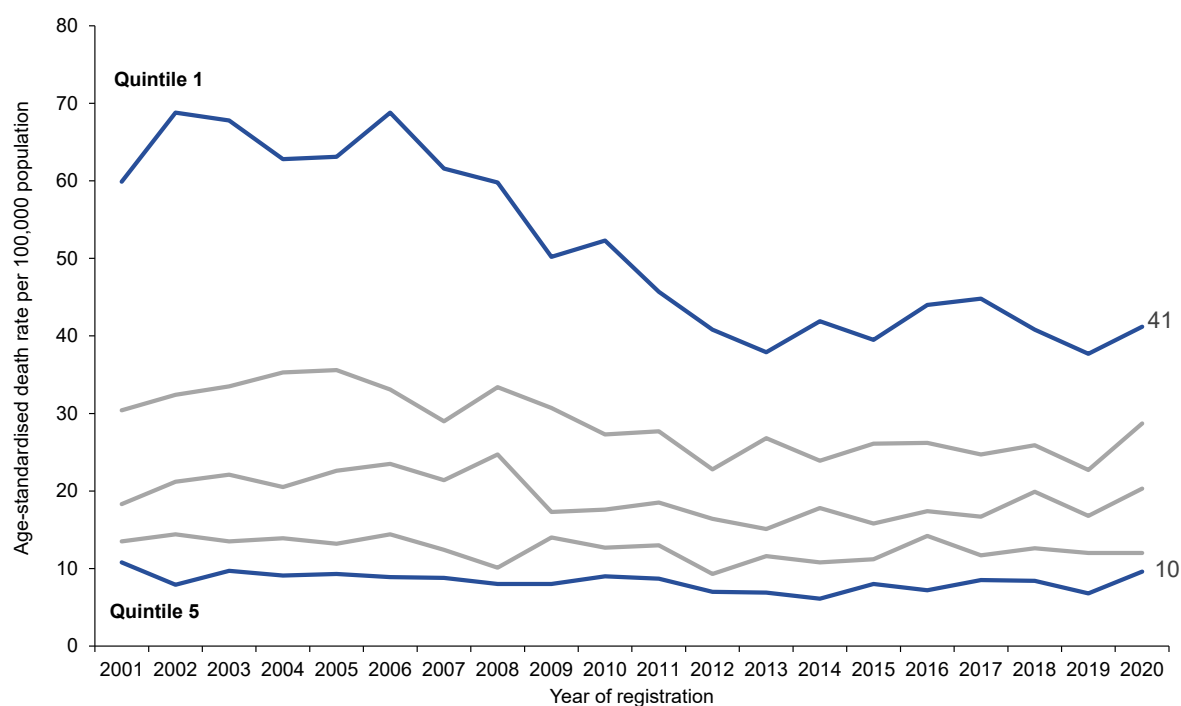
10. Alcohol-specific deaths by deprivation

The age-standardised death rates for alcohol-specific deaths in the most deprived 20% of areas in Scotland has been consistently higher than the rest for the duration of this time series.

The death rate in the most deprived areas is 4.3 times the rate in the least deprived areas in 2020 (41 deaths per 100,000 compared to 10).

Since 2001 the death rate in the most deprived areas has remained the highest of all five SIMD quintiles although the gap has narrowed slightly, due to a decrease in the death rate in the most deprived quintile in the period up to 2013 whilst rates have remained relatively unchanged in the other quintiles.

Figure 8: Alcohol-specific age-standardised deaths by deprivation quintile, Scotland, 2001 – 2020



SIMD

The Scottish index of multiple deprivation is a measure of how deprived an area is. A score is given to all of Scotland's datazones based on multiple indicators of deprivation.

The datazones are then ranked 1 to 6,976 based on their score. Subsequently, the rankings are split into 10 equally sized groups forming SIMD deciles and five groups for SIMD quintiles.

11. Alcohol-specific deaths by urban rural classification

The areas with the highest death rates of alcohol-specific deaths in 2020 were in the urban areas:

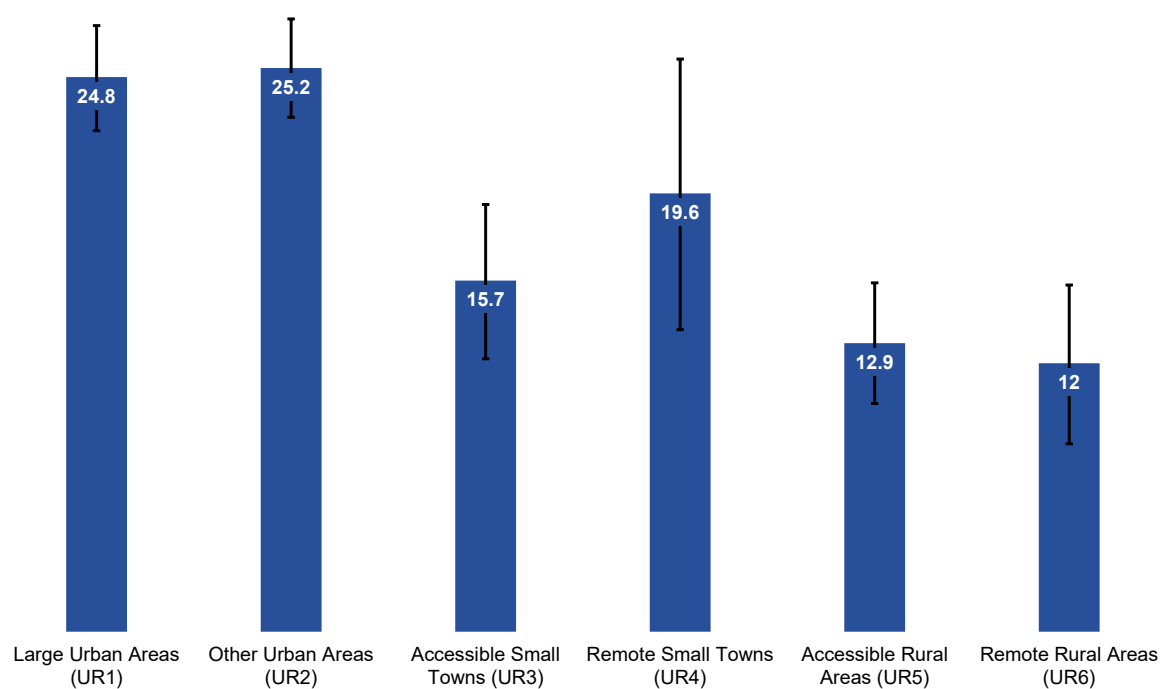
- Other urban areas (25.2 deaths per 100,000)
- Large urban areas (24.8 deaths per 100,000)

The areas with the lowest death rates were:

- Remote rural areas (12 deaths per 100,000)
- Accessible rural areas (12.9 deaths per 100,000)

The alcohol-specific death rate in other urban areas was 2.1 times the rate in remote rural areas in 2020.

Figure 9: Alcohol-specific age-standardised deaths by urban rural classification, registered in Scotland 2020

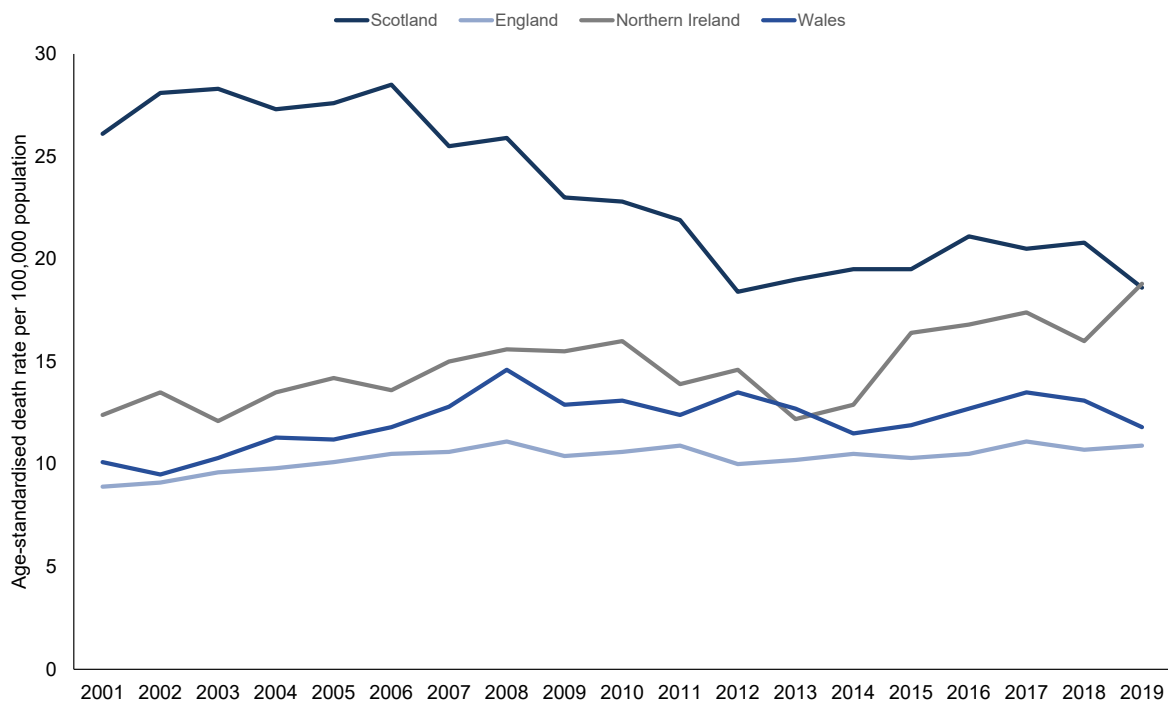


12. Comparison with other UK countries

Scotland has had the highest age-standardised death rate of all UK constituent countries for the duration of this time series (since 2001). The age-standardised death rates for England and Wales have remained relatively unchanged.

Death rates in Scotland declined from 2006 until 2012 whilst in Northern Ireland they began to increase in 2014. This continued until 2019 where the rates for both Scotland and Northern Ireland were similar whilst Wales and England have consistently had the lowest rates in the UK.

Figure 10: Alcohol-specific age-standardised death rates per 100,000 population in UK constituent countries, 2001 – 2019



13. Methodology

A full statistical methodology document is available on the [NRS website](#).

14. Strengths and Limitations

Strengths

1. Information is supplied when a death is registered, giving complete coverage of the population and ensures highly accurate estimates that are representative of the population.
2. Coding for cause of death is carried out according to the World Health Organization (WHO) ICD-10 and agreed rule.
3. The use of age-standardised mortality rates means our statistics are comparable between local health boards, councils and at national level.
4. The use of the national statistics definition also makes the statistics in this report comparable nationally.

Limitations

1. The definition of 'alcohol-specific deaths' underestimates the true extent of alcohol-attributable mortality.
2. The largely chronic nature of the conditions defined as wholly attributable to alcohol mean that there may be a delay between changes in alcohol consumption and behaviour and the resulting change in the number of alcohol-specific deaths.

15. Future developments

The next scheduled publication for further alcohol deaths statistics in Scotland is June 2022.

16. Related Statistics

- Prior to 2021, alcohol death statistics were published in a summary format on the NRS website.

- The ONS publish alcohol death statistics for England and Wales, [deaths by cause](#).
- The NIRSA publish alcohol deaths for Northern Ireland, [deaths by cause](#).

17. Notes on statistical publications

National Statistics

The United Kingdom Statistics Authority (UKSA) has designated these statistics as National Statistics, in line with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics (available on the [UKSA](#) website).

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is National Records of Scotland's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Information on background and source data

Further details on data source(s), timeframe of data and timeliness, continuity of data, accuracy, etc. can be found in the metadata that is published alongside this publication on the NRS website.

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Recording the present – At our network of local offices, we register births, marriages, civil partnerships, deaths, divorces and adoptions in Scotland.

Informing the future – We are responsible for the Census of Population in Scotland which we use, with other sources of information, to produce statistics on the population and households.

You can get other detailed statistics that we have produced from the [Statistics](#) section of our website. Scottish Census statistics are available on the [Scotland's Census](#) website.

We also provide information about [future publications](#) on our website. If you would like us to tell you about future statistical publications, you can register your interest on the Scottish Government [ScotStat website](#).

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Enquiries and suggestions

Please get in touch if you need any further information, or have any suggestions for improvement.

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